

VIBRATION TYPE LEVEL SWITCH

# HTM-30T Series



2 YEARS WARRANTY



ASME



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## Overview

**HTM-30T Series** is a Vibration Type Level Switch which is generally calling as Tuning Fork type consisting of a membrane and stainless steel tuning forks. It outs relay contact signal after detecting of liquid or solid level in the tank and can be especially applied for alarm and process control, etc., and is a product with 2 wire loop powered type, connecting to I-Control Unit.

## Characteristics

- Current output type having 2-wire loop powered.
- Digital operating system based on Microprocessor.
- Detecting of various kinds of liquid and solid level.
- Activation Point User Setting function.
- Adjustment function with Delay and Return Time.
- Switching function between Contact type. (NO, NC)
- Easy operating check through LED indicator.

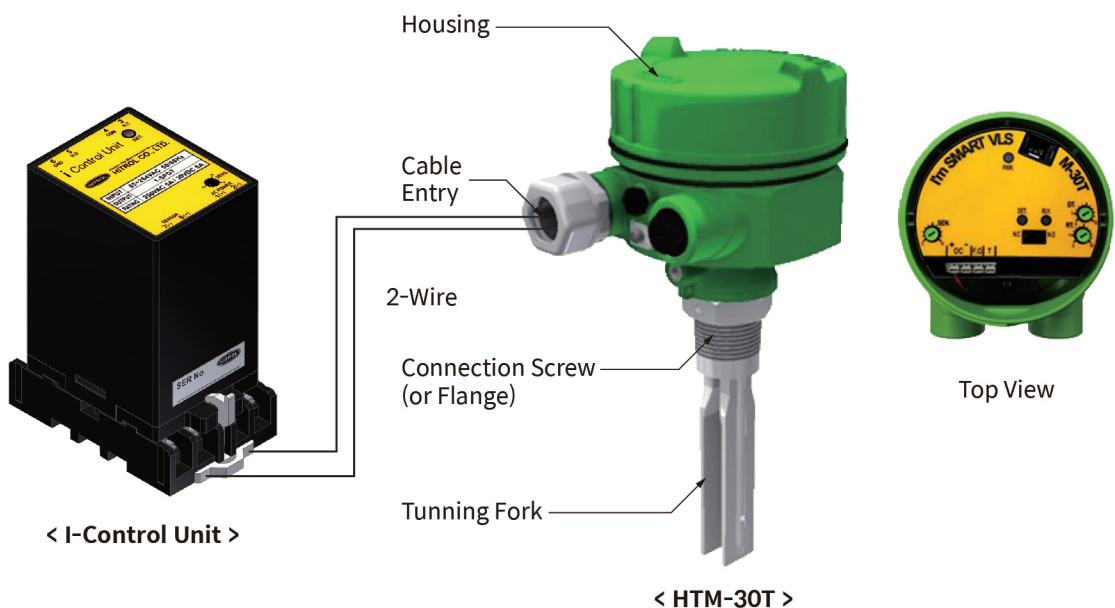


CONTROL PART

## Operation Principle and Composition

Tuning fork of the level switch is continuously vibrated by the oscillator or piezo sensor. When the tuning fork is contacted by the medium, the oscillator of piezo sensor is stopped by decreased vibration frequency. At this moment, changed current signal is detected by the I-Control Unit (or PLC) and relay is activated, producing a contact output signal.

# VIBRATION TYPE LEVEL SWITCH HTM-30T Series



## Specification

### ► Specification

Model	HTM-30T (Weather-Proof Version)	HTM-30T-Ex-(** ) (Ex-Proof Version)
Housing ; Cable Entry	PBT / AL.C ; 2 - PF 1/2 "(F)	AL.C ; 2 - PF 1/2 "(F)
Enclosure	Weather-Proof (PBT ; IP65 / AL.C ; IP66)	Ex tD A21 IP66 T85°C/T160°C(*) Ex d IIC T3/T4/T5/T6(*), IP66
Max. Temperature	PBT Housing: 80°C AL.C Housing: 150°C	Dust-Proof : Max. 50°C for T85°C Max. 150°C for T160°C Ex-Proof : Max. 150°C for T3 / Max. 100°C for T4 Max. 60°C for T5 / Max. 50°C for T6
Ambient Temperature	-20°C ~ +60°C	
Max. Process Pressure	20kgf/cm <sup>2</sup> (Screw Type)	
Mounting	Screw, Flange	
Output Signal	SPDT	
Power Source	DC 24V (2-Wire Loop)	
Wetted Part Material	316L SS + SCS14 (Opt. HASTELLOY-C)	
Process Connection	PT 1"(M)	
Installation	Side & Top	



(\*\*) Refer to model identification method

(\*) Fluid Temperature and Class of Dust-Proof and Ex-Proof

### ► AMPLIFIER Specification (M-30T)

Model	Specification	
Module	M-30T	
Micom	16Bit Microprocessor	
Oscillation Frequency	380KHz @ ± 50KHz	
Sensitivity Resolution	1Hz	
Current Out	Current Control - N.C	Non Detection: 9mA
		Detection: 16mA
	Current Control - N.O	Non Detection: 16mA
		Detection: 9mA
Current Control	Normal Close @ Default 9mA	
Status Indicator	Bi-Color LED [Green / Red / Orange]	
Detection Indicator	RED LED	
Relay Control Indicator	GREEN LED	
Dielectric Constant	0.6g/cm <sup>3</sup> @ Min. (Liquid)	
Dimension	80mm x 65mm x 54mm	
Weight	110g	

► **Combination Unit (I-CONTROL UNIT)**

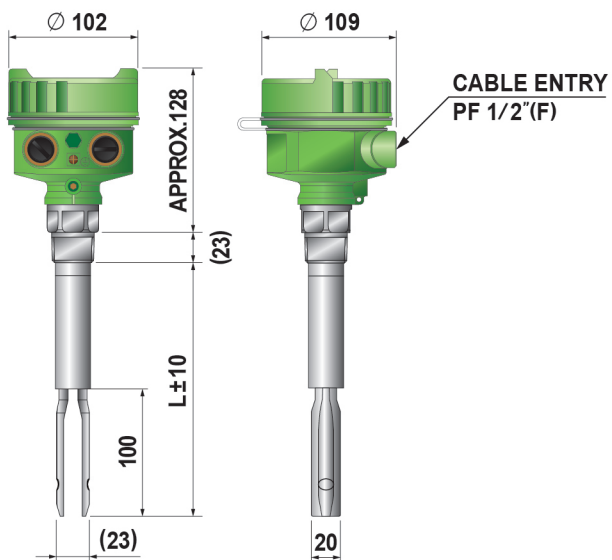
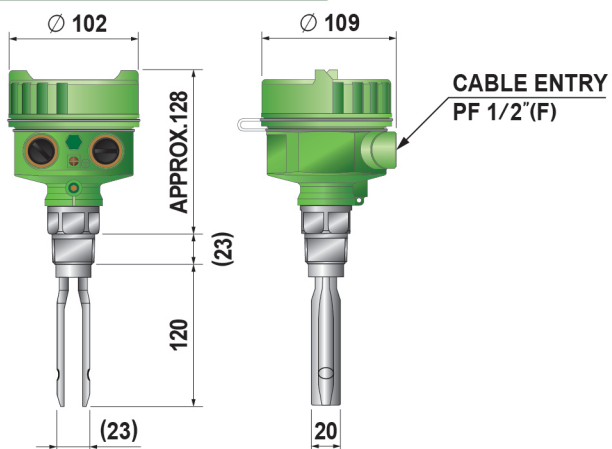
Model	Specification	
Installation	Local	Pannel Inside
Ambient Temperature	-20~+80°C	
Power Source	AC Free (AC 85~264V) (std.), DC 24V (opt.)	
Current Measuring Range	DC 4-20mA @ Adjustment	
Contact Form	DPDT	SPDT
Contact Rating	AC 250V 5A, DC 30V 5A	
Sensor To Unit Distance	Max. 500M	
Enclosure	Weather Proof (IP65)	-
Housing Material	Aluminum	-
Cable Entry	PF 3/4 "(F)(std)	Terminal Block
Appearance		

► **Order Code** can be printed at our website ([www.hitrol.com](http://www.hitrol.com))

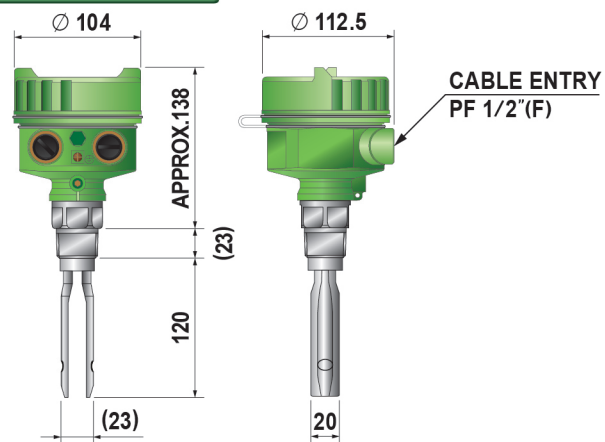
## Dimension

### ► Screw type

#### HTM-30T (Screw Type)

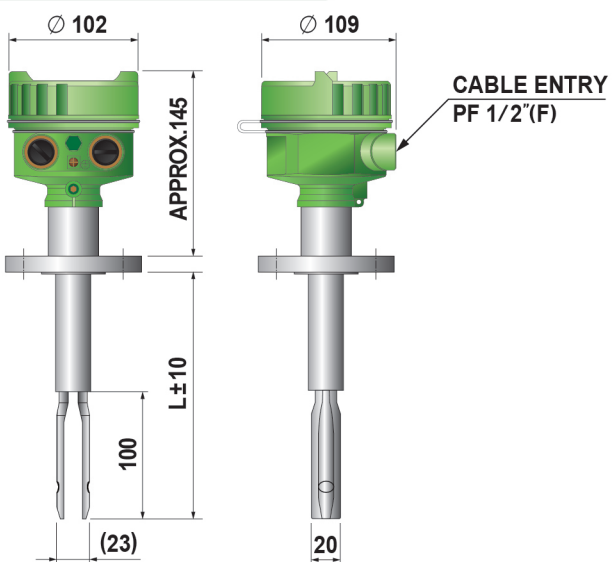


#### HTM-30T-EX\*\*

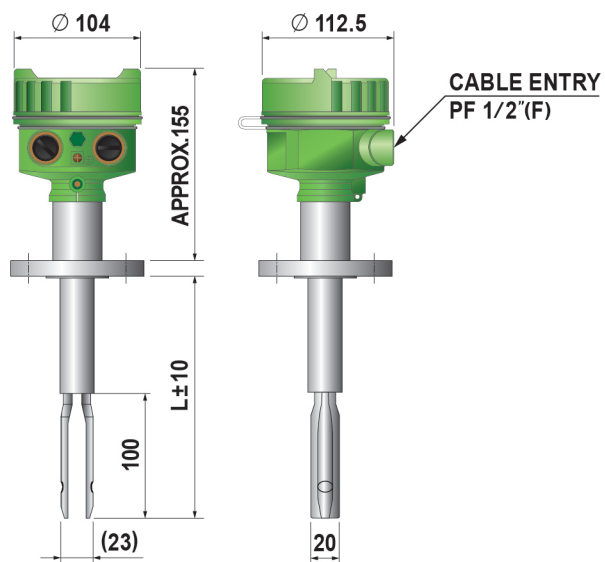


### ► Flange type

#### HTM-30T (Flange Type)



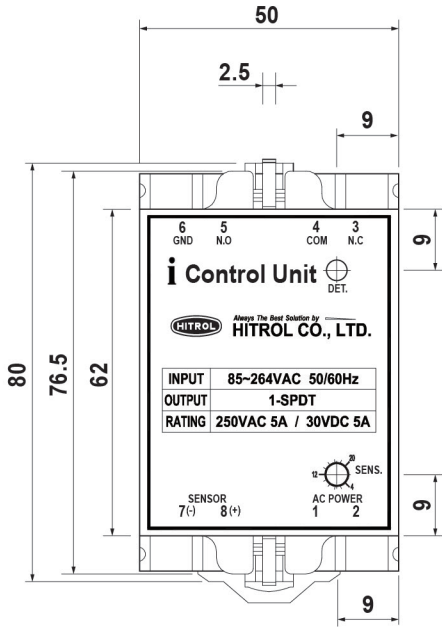
#### HTM-30T-EX\*\*



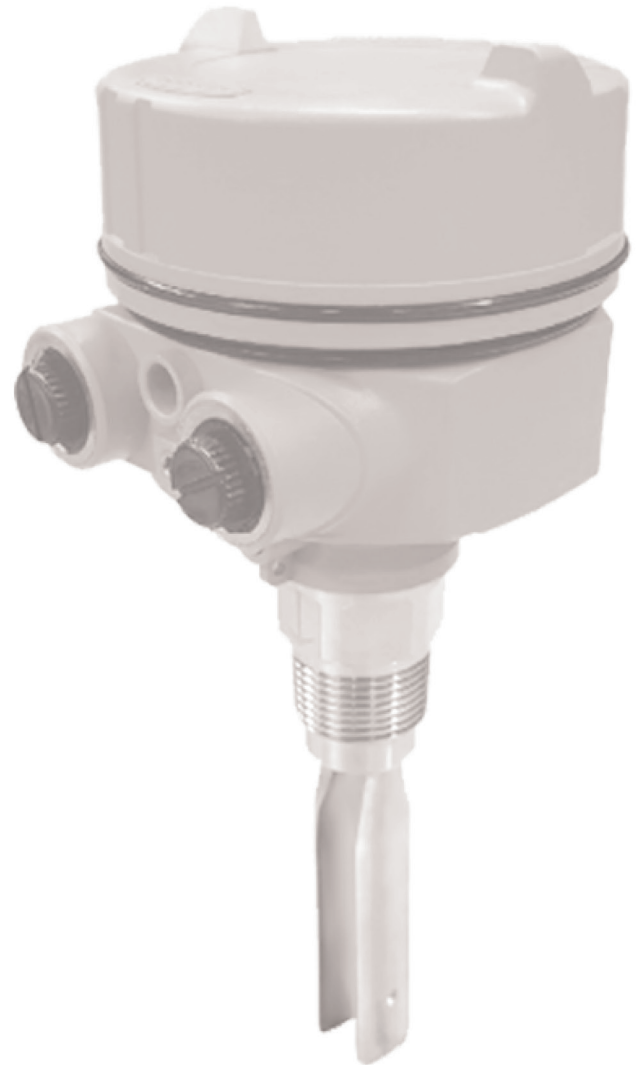
■ Actual product may have a tolerance slightly.

► **Combination Unit**

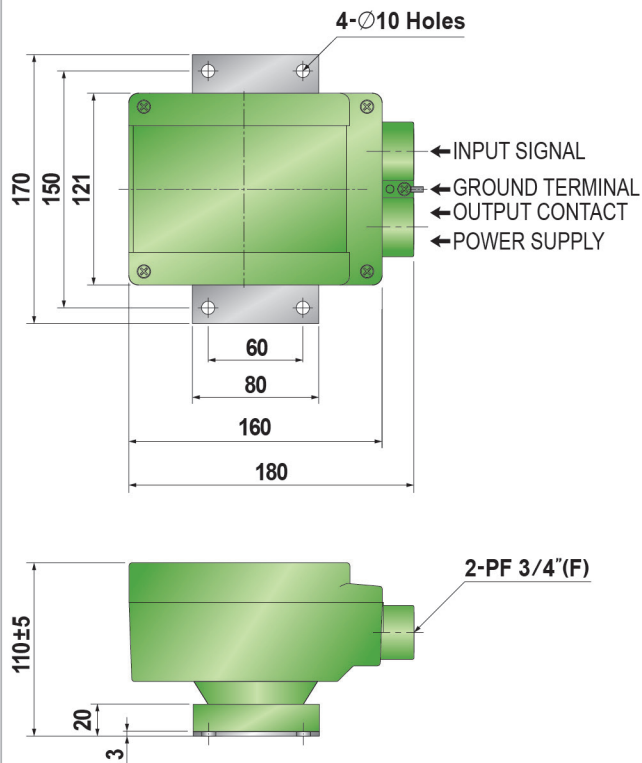
**I-CONTROL UNIT**  
(Panel Type)



Level Switch



**I-CONTROL UNIT**  
(Local Type)

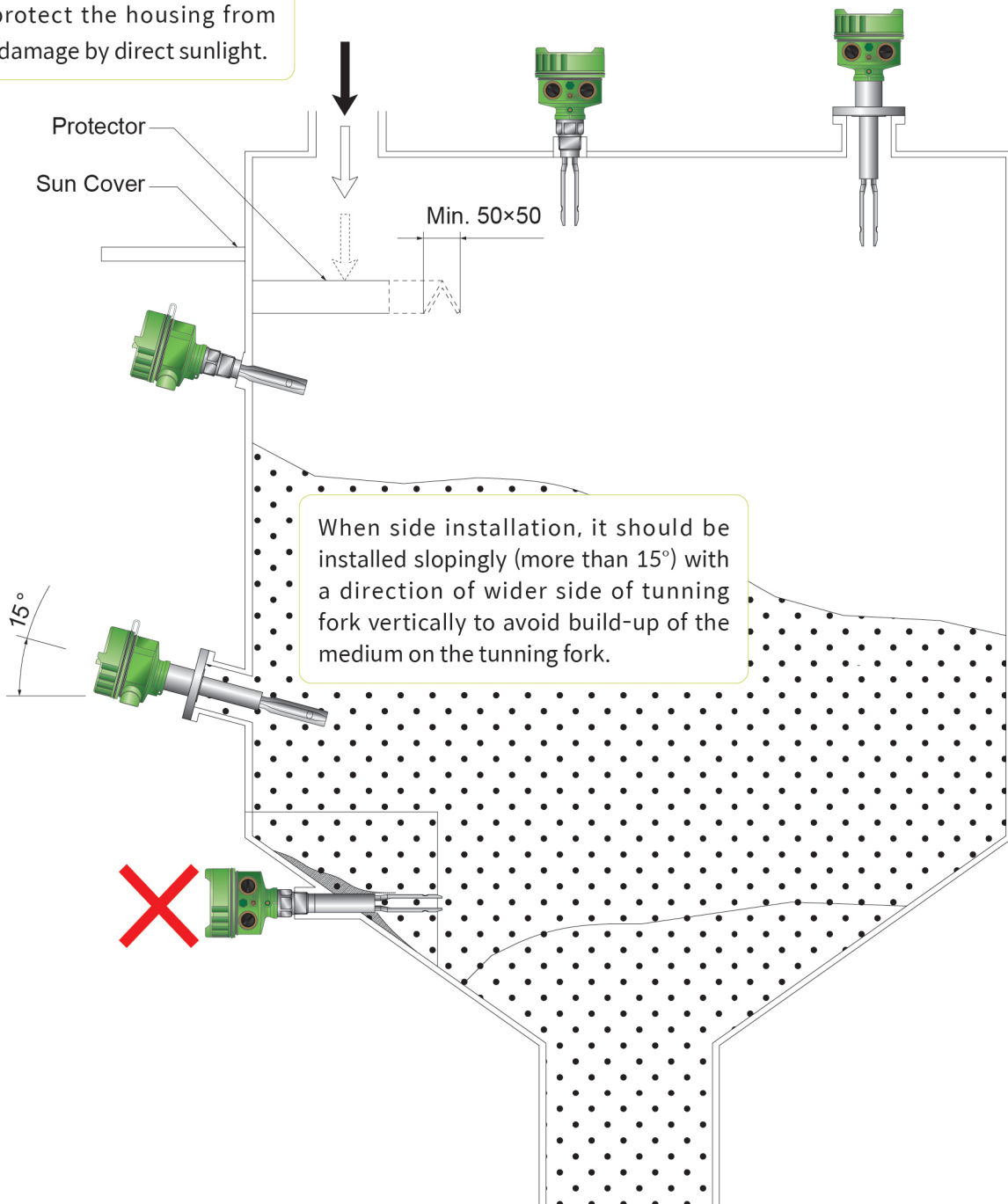


## Installation

- Below recommendation should be considered when installation.

Sun cover should be installed to protect the housing from the damage by direct sunlight.

Sensor should be installed at the place far from inlet of the tank and protector should be installed in order to protect the sensor from damage by falling medium if it is installed at the inlet.



When side installation, it should be installed slopingly (more than 15°) with a direction of wider side of tuning fork vertically to avoid build-up of the medium on the tuning fork.

VIBRATION TYPE LEVEL SWITCH

# HTM-30T Series

01 Current output version.  
(2-wire loop connection)

02 Various kinds of solid or liquid levels  
can be detected.

03 Digital Operating System based  
on Microprocessor.



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\* Design of product can be changed for upgrade without notice.